

AWAP060-R2

User's Manual

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Unpacking Information

Thank you for purchasing ALFA Outdoor AP/CPE. Before you start, please check all the contents of this package.

The product package should include the following:

- 1. One AWAP060-R2
- One PoE power adapter
 One User Manual (CD)

- One Mounting kits
 One 12VDC Power Adapter

General Description

Easily constructing your WLAN, this wireless Outdoor AP/CPE offers a wireless interface and eliminates to connect your wireless Internet provider.

With being compliant to IEEE 802.11g specification, this wireless Outdoor AP/CPE supports data rate up to 54Mbps and hence help to construct your high-speed wireless connection from your wireless internet provider.

This wireless Outdoor AP/CPE equips one POE RJ45 LAN port and one embedding 12dBi Panel antenna for you to easy to install and setup. The wireless security mechanism is provided over 64/128-bit WEP, WPA (TKIP with IEEE 802.1x), WPA2 and AES.

This device supports WEB-based user interface that helps users to configure this device easily.

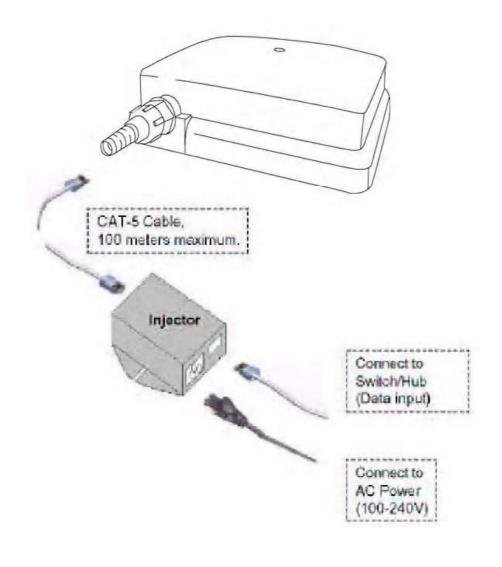
Key Features

Complies with IEEE 802.11b/g wireless standards
High speed transfer data rate up to 54Mbps
Supports turbo mode for 72Mbps data transfer
Supports wireless data encryption with 64/128-bit WEP, WPA (TKIP with IEEE 802.1x), WPA2 and AES functions

Connecting Outdoor AP/CPE to Your Network.

This AWAP06O-R2 provides a step-by-step guide to the installation and configuration of this wireless Outdoor AP/CPE

Use RJ45 cable to connect Outdoor AP/CPE POE port and the other end connect to the APOE02 , the APOE02 connect to the Notebook or PC. And 12VDC Power Adapter. To get the signal from the Wireless Internet Provider.



Management

Configuring the IP address of your computer

In order to manage with this Wireless Outdoor AP/CPE, you have to configure the IP addresses of your computer to be compatible with this device.

Note:

1. The default network setting of the device:

 IP address:
 192.168.1.1

 Subnet Mask:
 255.255.255.0

 Default Gateway:
 192.168.1.254

- 2. In the following TCP/IP configuration guide, the IP address "192.168.1.2" is assumed to be your IP address. Please **DO NOT** choose 192.168.1.1 for the IP address (192.168.1.1) has been set as the default IP for this device.
- 3. The following TCP/IP configuration guide uses windows XP as the presumed operation system.

Procedures to configure IP addresses for your computer

1. If you are in Classic Start menu view, click **Start Settings Control Panel Network Connections**.

If you are in Start menu view, click **Start Control Panel Network Connections.**

2. Double click "Local Area Connection"



3. Choose Internet Protocol (TCP/IP) and click Properties.



4. Choose "Use the following IP address" to specify IP addresses manually. Fill in the IP addresses in each column. Please click the OK button after your configuration.



Starting the WEB-Based Management Interface

The device uses WEB as the management interface. You can use a browser to access the management interface easily. Please follow up the steps listed below.

- 1.Double click the Internet WEB browser icon on your desktop screen (NetscOutdoor AP/CPEe Communicator 4.0 and Internet Explorer 3.0 or update version)
- 2. Type 192.168.1.1 into the URL WEB address location and press Enter.



3. The Username and Password Required window Outdoor AP/CPEpears. Enter admin in the User Name location (default value). Enter admin in the Password location (default value). Click "OK" button



The GrOutdoor AP/CPEhic User Interaface

After the password authorization, the Setup Wizard shows up as the home page of the GrOutdoor AP/CPEhic User interface. You may click on each folder on left column of each page to get access to each configuration page.



Status

The Status page shows the following information of the device.

Items	Information
Uptime	The period that you turn the device on.
Firmware version	The current firmware version of the device.
Mode	Shows if the device is operating in client.
Band	The band that the wireless client operating.
SSID	The name of this wireless network.
Channel Number	The channel that the wireless network using.
Encryption	The security encryption type that the wireless network using.
BSSID	The Basic Service Set Identity of this OUTDOOR
	AP/CPE(This parameter is the same as the MAC address of LAN port)
Attain IP Protocol	The way for this client to get a IP address.
IP Address	The current IP address of this client
Subnet Mask	The current subnet mask of this client
Default Gateway	The current default gateway of this client
MAC Address	The current MAC address of this client

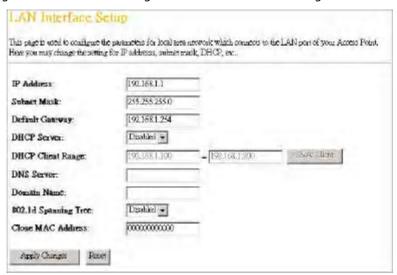
Status

This page shows the current status and some basic settings of the device.

SYSTEM	A 100 C C C C C C C C C C C C C C C C C C
Uptime	Oday Oh: 12m: 25s
Firmware Version	vl.0
Wireless Configuration	
Mode	AP+WDS
Band	2.4 GHz (B+G)
SSID	WLAN-11g-AP
Channel Number	
Encryption	Disabled(AP), Disabled(WDS)
DI 228	00 e0 78 e0 e7 e1
Associated Clients	0
LAN Configuration	7.00
Attain IP Protocol	Static IP
IP Address	10.10,99.146
Subnet Mask	255.255.255.0
Default Gateway	10.10,99,254
MAC Address	00±0:74:00:c7:41

LAN Interface Setup

This page allows users to configure the LAN network settings.



Configuration

IP address	The IP of Outdoor AP/CPE LAN port (Default 192.168.1.1)
Subnet Mask	Subnet Mask of you LAN (Default 255.255.255.0)
Default Gateway	The default gateway of this OUTDOOR AP/CPE.
DHCP Server	Select "Enable" to enable the DHCP server, which gives your LAN Client an IP.
DHCP Client Range	Specify the DHCP Client IP address range. You can also click the "Show Client" button to list those connected DHCP clients.
DNS Server	The DNS (domain name server) of this OUTDOOR AP/CPE.
Domain Name	The name that the OUTDOOR AP/CPE is going to be recognized in LAN.
802.1d Spanning tree Clone MAC Address	To prevent from network loops and preserve the quality of bridged network MAC cloning feature allows the MAC address reported by WAN side network interface card to be set to the MAC address already registered with the ISP eliminating the need to register the new MAC address with the ISP. This feature does not change the actual MAC address on the NIC, but instead changes the MAC address reported by this device to client requests. To Change the MAC address, enter it in the text box.
	requests. To change the PIAC address, effect it in the text box.

System Log

This System Log page shows the information of the current activities on the OUTDOOR AP/CPE.

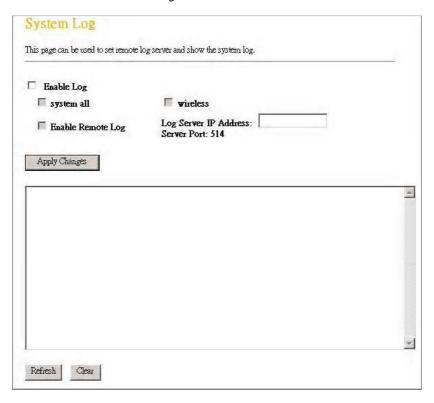
To enable system log function:

- 1. Mark the "Enable Log" checkbox.
- To see all information of the system, select the "system all" checkbox.

To see wireless information only, select the "wireless" checkbox. To send the log information to a certain note, select the "Enable Remote Log" checkbox and fill in the IP address in the "Log Server IP Address" box.

3. Click the "Outdoor AP/CPEply Changes" button to activate

You could also click the "Refresh" button to refresh the log information or click the "clear" button to clean the log table.



Password Setup

This page allows users to configure the username and password for getting accessed to this WEB based user interface.

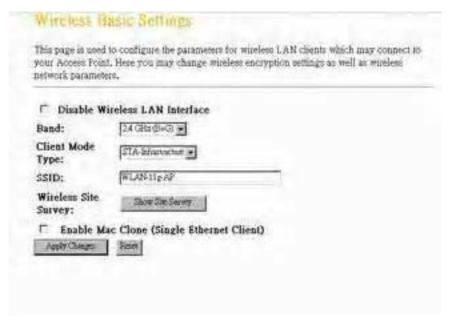
To change the username/password, please fill in the username, New password and click the "Outdoor AP/CPEply Changes" button after confirming the password.

You may also cancel the password authentication by leaving those blanks empty then clicking the "Outdoor AP/CPEply Changes" button.

Password Setu	D .
This page is used to set the a password will disable the pr	account to access the web server of Access Point, Empty user name and otection.
User Name:	
New Password:	
Confirmed Password:	
Apply Changes	Reset

Basic Settings

This page provides setting up the wireless configuration and monitoring the Wireless Clients that associate with this OUTDOOR AP/CPE.



Configuration

Disable Wireless To Disable interface of Wireless LAN

LAN Interface

Band To select a band for this device to match 802.11b,

802.11g or both.

CLIENT Mode Type Configure this device as OUTDOOR AP/CPE,

Infrastructure or Ad-Hoc.

SSID The name of the wireless network

Wireless Site Survey Click the "Show Site Survey" button, then an "Wireless

Site Survey" will pop up. You can see the status of all

wireless stations that are able to connecting

Wireless Site Survey

This is the window that pops up after clicking the "wireless site survey" button.



SSID	Show the all SSID of in range Access Point	
BISSID	Show the Mac address of in range Access Point	
Channel	The channel of in range Access Point active channel	
Туре	The type of AP	
Encrypt	Encrypt method of in range Access Point	
Signal	Signal strength of in range Access Point	
Select	Select in range Access Point to connect	

Advanced Settings

You can set advanced wireless LAN parameters of this OUTDOOR AP/CPE. The parameters include Authentication Type, Fragment Threshold, RTS Threshold, Beacon Interval, Data Rate, Preamble Type, Broadcast SSID, IOUTDOOR AP/CPEP and 802.11g Protection.

[20][20][20][20][20][20][20][20][20][20]	ore technically advanced users who have a sufficient knowledge about should not be changed unless you know what effect the changes will have
Authentication Type:	Open System O Shared Key • Auto
Fragment Threshold:	2346 (256-2346)
RTS Threshold:	2347 (0-2347)
Beacon Interval:	(20-1024 ms)
Data Rate:	Auto 🔻
Preamble Type:	
Broadcast SSID:	© Enabled C Disabled
IAPP:	€ Enabled © Disabled
802.11g Protection:	← Enabled ← Disabled
RF Output Power:	€ 100% C 50% C 25% C 10% C 5%
Turbo Mode:	C Auto C Always • Off

Configuration

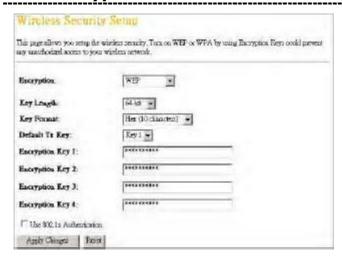
	Open System mode	Allow communication with no security.
Authentication Type	Shared Key mode	Allow communication with devices with the same WEP key only.
Туре		The wireless client can associate with this OUTDOOR AP/CPE by using any one of these two Modes.

Fragment Threshold	To specifies the maximum size of packet during the data transition. The lower values you set, the worst performance it will be.
RTS Threshold	If the packet size is smaller the RTS threshold, the OUTDOOR AP/CPE will not send this packet by using the RTS/CTS mechanism.
Beacon Interval	The period of time how long a beacon is broadcasted.
Data Rate	The "Data Rate" is the data packets limitation this wireless OUTDOOR AP/CPE can transmit. The wireless OUTDOOR AP/CPE will use the highest possible selected transmission rate to transmit the data packets.
Preamble Type	It defines the length of CRC block in the frames during the wireless communication. "Short Preamble" is suitable for heavy traffic wireless network. "Long Preamble" provides much communication reliability
Broadcast SSID	If you enable "Broadcast SSID", every wireless station located within the coverage of this wireless OUTDOOR AP/CPE can discover this wireless OUTDOOR AP/CPE easily. If you are building a public wireless network, enabling this feature is recommended. Disabling "Broadcast SSID" can provide better security.
IOUTDOOR AP/CPEP	To enables multiple OUTDOOR AP/CPE to communicate and pass information regarding the location of associated Stations.
802.11g Protection	Some 802.11g wireless ad Outdoor AP/CPEters support 802.11g protection, which allows the ad Outdoor AP/CPEters searches for 802.11g singles only. Select the "Disabled" to disable supporting 802.11g protection or select "enable" to support this function.
RF Output power	Select the RF (Radio Frequency) power. The RF output powe has positive correlation with signal strength.
Turbo Mode	Some of our wireless adOutdoor AP/CPEters supports turbo mode, which provides a better connection quality. Select "Always" to support turbo mode or select "off" to turn it off . Select "Auto" turns it on or off automatically.

Security

At the page, you can set up the WEP, WPA Encryption to ensure the security of your Wireless. You will have to do different configurations to each encryption modes. Click on the Encryption drop list to select an encryption mode or select "Disabled" to transmitting data without encryption.

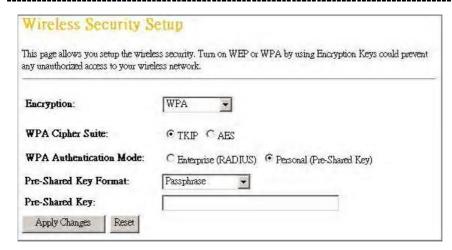
WEP Encryption



Configuration

Encryption	To enable WEP, WPA, WPA2 and WPA2 Mixed encryption modes, select the option in the drop list. If you select none, any data will be transmitted without Encryption and any station can access the OUTDOOR AP/CPE
Key Length	Select a key length as 64-bit or 128-bit.
Key Format	Select a key format as Hex or ASCII
Default Tx Key	Select a default key for transmitting data.
Use 802.1x Authentication	Mark this check box. Fill in the RADIUS server IP address, Port Number, and Password to enable 802.1x authentication.

WPA Encryption



Configuration

Encryption	To enable WEP, WPA, WPA2 and WPA2 Mixed encryption modes, select the option in the drop list. If you select none, any data will be transmitted without Encryption and any station can access the OUTDOOR AP/CPE.
WPA Cipher Suite	Select the WPA Cipher Suite to be TKIP or AES
WPA Authentication Mode	Select the WPA mode as "Enterprise (WPA-Radius)" or "Personal (Pre-Shared Key)".
Pre-Shared key Format	Click on the drop list to select an Pre-Shared Key Format as Passphrase or Hex
Pre-shared Key	Enter the Pre-shared Key according to the pre-shared key format you select.

WPA2 Encryption

This page allows you setup the wirele uny unauthorized access to your wire	ess security. Turn on WEP or WPA by using Encryption Keys could preven less network.
Encryption:	WPA2
WPA2 Cipher Suite:	CIKIP CAES
WPA Authentication Mode:	C Enterprise (RADIUS) • Personal (Pre-Shared Key)
Pre-Shared Key Format:	Passphrase
Pre-Shared Key:	

Configuration

Encryption	To enable WEP, WPA, WPA2 and WPA2 Mixed encryption modes, select the option in the drop list. If you select none, any data will be transmitted without Encryption and any station can access the OUTDOOR AP/CPE.
WPA2 Cipher Suite	Select the WPA2 Cipher Suite to be TKIP or AES
WPA Authentication Mode	Select the WPA mode as "Enterprise (WPA-Radius)" or "Personal (Pre-Shared Key)".
Pre-Shared key Format	Click on the drop list to select an Pre-Shared Key Format as Passphrase or Hex
Pre-shared Key	Enter the Pre-shared Key according to the pre-shared key format you select.

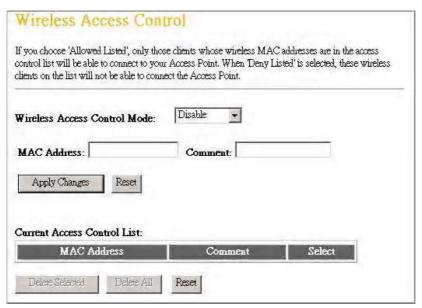
WPA2 Mixed Encryption

Wireless Security S This page allows you setup the wireleany unauthorized access to your wire	ess security. Turn on WEP or WPA by using Encryption Keys could prevent
Encryption:	WPA2 Mixed •
WPA Cipher Suite:	TKIP CAES
WPA2 Cipher Suite:	CTKIP • AES
WPA Authentication Mode:	C Enterprise (RADIUS) Personal (Pre-Shared Key)
Pre-Shared Key Format:	Passphrase 🔻
Pre-Shared Key:	
Apply Changes Reset	

Configuration

Encryption	To enable WEP, WPA, WPA2 and WPA2 Mixed encryption modes, select the option in the drop list. If you select none, any data will be transmitted without Encryption and any station can access the OUTDOOR AP/CPE.
WPA Cipher Suite	Select the WPA Cipher Suite to be TKIP or AES
WPA2 Cipher Suite	Select the WPA2 Cipher Suite to be TKIP or AES
WPA Authentication Mode	Select the WPA mode as "Enterprise (WPA-Radius)" or "Personal (Pre-Shared Key)".
Pre-Shared key Format	Click on the drop list to select an Pre-Shared Key Format as Passphrase or Hex
Pre-shared Key	Enter the Pre-shared Key according to the pre-shared key format you select.

To restrict the Number of Access authentication of Stations, Set up the control list in this page.



Configuration

Wireless Access Control Mode

Click on the drop list to choose the access control mode. You may select "Allow listed" to allow those allowed MAC addresses or select "Deny Listed" to ban those MAC addresses from accessing to this device.

MAC Address & Comment

To set up the Value of MAC Address & Comment; enter the MAC Address and Comment of station and click Outdoor AP/CPEply Changes to save.

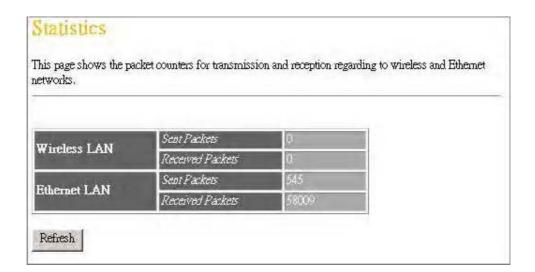
Current Access Control list

To Delete the station on the list, Click the check box in the select item and click the "Delete Selected". If you want to delete all stations on the list, click "Delete All" to remove all of them.

Click <Outdoor AP/CPEply Change> button to save the above configurations. You can now configure other advance sections or start using the OUTDOOR AP/CPE.

Statistics

On this page, you can monitor the sent & received packets counters of wireless, Ethernet LAN, and Ethernet WAN. To see the latest report, click refresh button.



Upgrade Firmware

To Upgrade Firmware,

STEPS

- Click "browse..." button to select the firmware you want to upgrade.
- 2. Click Upload to start the upgrade process. Please don't close the WEB-browser and wait for the process to be completed.

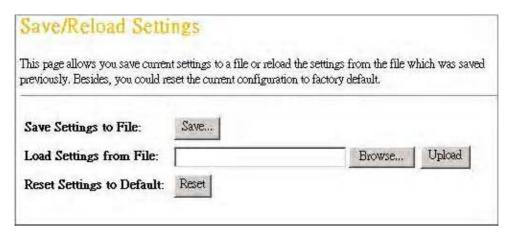
Upgrade Firmware This page allows you upgrade the Access Point firmware to new version. Please note, do not power off the device during the upload because it may crash the system. Select File: Upload Reset

Save and Reload Settings

To save setting to file, click "Save..." button. To load setting from file,

- 1. Click "Browse.." on the to select the file
- 2. Click upload to start the process and wait for it to complete

To reset setting to Default, click the Reset button to start the process.



Log out

Click the "Outdoor AP/CPEply Change" button to log out the system and save your changes simultaneously.

Logout	
This page is used to logout.	
Do you want to logout?	
Apply Change	

Product Specifications

Standard	IEEE802.3, 10BASE-T IEEE802.3u, 100BASE-TX IEEE802.3x full duplex operation and flow control IEEE802.11b wireless LAN infrastructure IEEE802.11g wireless LAN infrastructure
Interface	
Cable Connections	RJ-45 (10BASE-T): Category 3,4,5 UTP RJ-45 (100BASE-TX): Category 5 UTP
Network Data Rate	802.11b: 1, 2, 5.5 and 11Mbps 802.11q: 6, 9, 12, 18, 24, 36, 48, and 54Mbps
Transmission Mode	Auto-Negotiation (Full-duplex, Half-duplex)
Security	64/128-bit WEP, WPA(TKIP with IEEE 802.1x), WPA2, AES
Receiver Sensitivity	54Mbps OFDM, 10%PER, -68dBm 11Mbps CCK, 10%PER, -86dBm 1Mbps BPSK, 10%PER, -93dBm
Memory	Flash: 2MB, SDRAM: 8MB
Transmit Power	23dBm
Emission	FCC CLASS B, CE
Environmental	Operating Temperature: 0° ~ 40°C (32° ~ 104°F) Storage Temperature: -10° ~ 70°C (-14° ~ 140°F) Humidity: 10 ~ 95% RH non-condensing
Power Supply	PoE 12VDC